

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method that facilitates dynamic delivery of
2 service profiles to a client, comprising:
3 performing a discovery operation to allow the client to discover new
4 services on a network;
5 if a new service is discovered for which the client does not possess a
6 service profile for the new service, causing the client to obtain the service profile
7 from a service provider of the new service;
8 wherein causing the client to obtain the service profile involves:
9 causing the client to send a request for the service profile to the
10 service provider of the new service, wherein the request includes type
11 information identifying the type of device platform of the client; and
12 causing the service provider to select the service profile from a set
13 of service profiles based on the received type information of the client;
14 and
15 causing the service profile to be installed on the client to enable the client
16 to use the new service,
17 wherein the service profile includes a specification that describes how to
18 use the new service, and wherein causing the service profile to be installed on the
19 client involves,
20 causing device-specific code to be generated to implement the
21 specification, and

22 causing the code to be installed on the client; and
23 wherein the service profile is a dynamic extension profile, which provides
24 commands that: allows the client to dynamically acquire other service profiles
25 when they are needed.
26 allow the client to query the service provider to determine which
27 service profiles are available on the service provider; and
28 transfer the service profile from the service provider to the client.

1 2. (Previously presented) The method of claim 1, wherein causing the
2 client to obtain the service profile involves:
3 causing the client to send a request for the service profile to the service
4 provider of the new service; and
5 causing the client to receive the service profile from the service provider
6 of the new service.

1 3. (Original) The method of claim 1, wherein the service profile
2 includes code, and wherein causing the service profile to be installed on the client
3 involves causing the code to be installed on the client.

1 4. (Cancelled)

1 5. (Original) The method of claim 1, wherein the service profile is
2 encoded in a universal form that can be executed by different types of clients.

1 6. (Previously presented) The method of claim 1,
2 wherein there exist different service profile implementations for different
3 types of clients; and
4 wherein causing the client to obtain the service profile involves,

5 communicating characteristics of the client to the service
6 provider of the new service,
7 allowing the service provider of the new service to select a
8 service profile implementation for the client based on the
9 characteristics of the client, and
10 allowing the service provider of the new service to send the
11 selected service profile implementation to the client.

1 7. (Previously presented) The method of claim 1, wherein causing the
2 client to obtain the service profile from the service provider of the new service
3 involves executing a dynamic extension profile, which implements a standard
4 protocol that enables the client to acquire any profile the client needs at the time
5 the profile is needed.

1 8. (Previously presented) The method of claim 1,
2 wherein performing the discovery operation involves using the Bluetooth
3 Service Discovery Protocol (SDP); and
4 wherein the client and the service provider of the new service
5 communicate using the Bluetooth networking standard.

1 9. (Original) The method of claim 1, wherein the service profile can
2 define a service-specific Application Programming Interface (API).

1 10. (Original) The method of claim 1, wherein the service profile
2 implements a domain-specific protocol stack associated with the new service.

1 11. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a

3 method that facilitates dynamic delivery of service profiles to a client, the method
4 comprising:

5 performing a discovery operation to allow the client to discover new
6 services on a network;

7 if a new service is discovered for which the client does not possess a
8 service profile for the new service, causing the client to obtain the service profile
9 from a service provider of the new service;

10 wherein causing the client to obtain the service profile involves:

11 causing the client to send a request for the service profile to the
12 service provider of the new service, wherein the request includes type
13 information identifying the type of device platform of the client; and

14 causing the service provider to select the service profile from a set
15 of service profiles based on the received type information of the client;

16 and

17 causing the service profile to be installed on the client to enable the client
18 to use the new service,

19 wherein the service profile includes a specification that describes how to
20 use the new service, and wherein causing the service profile to be installed on the
21 client involves,

22 causing device-specific code to be generated to implement the
23 specification, and

24 causing the code to be installed on the client;

25 wherein the service profile is a dynamic extension profile, which provides
26 commands that:which allows the client to dynamically acquire other service
27 profiles when they are needed.

28 allow the client to query the service provider to determine which
29 service profiles are available on the service provider; and

30 transfer the service profile from the service provider to the client.

1 12. (Previously presented) The computer-readable storage medium of
2 claim 11, wherein causing the client to obtain the service profile involves:
3 causing the client to send a request for the service profile to the service
4 provider of the new service; and
5 causing the client to receive the service profile from the service provider
6 of the new service.

1 13. (Original) The computer-readable storage medium of claim 11,
2 wherein the service profile includes code, and wherein causing the service profile
3 to be installed on the client involves causing the code to be installed on the client.

1 14. (Cancelled)

1 15. (Original) The computer-readable storage medium of claim 11,
2 wherein the service profile is encoded in a universal form that can be executed by
3 different types of clients.

1 16. (Previously presented) The computer-readable storage medium of
2 claim 11,
3 wherein there exist different service profile implementations for different
4 types of clients; and
5 wherein causing the client to obtain the service profile involves,
6 communicating characteristics of the client to the service
7 provider of the new service,
8 allowing the service provider of the new service to select a
9 service profile implementation for the client based on the
10 characteristics of the client, and

allowing the service provider of the new service to send the selected service profile implementation to the client.

1 17. (Previously presented) The computer-readable storage medium of
2 claim 11, wherein causing the client to obtain the service profile from the service
3 provider of the new service involves executing a dynamic extension profile,
4 which implements a standard protocol that enables the client to acquire any
5 profile the client needs at the time the profile is needed.

1 18. (Previously presented) The computer-readable storage medium of
2 claim 11,

3 wherein performing the discovery operation involves using the Bluetooth
4 Service Discovery Protocol (SDP); and

5 wherein the client and the service provider of the new service
6 communicate using the Bluetooth networking standard.

1 19. (Original) The computer-readable storage medium of claim 11,
2 wherein the service profile can define a service-specific Application
3 Programming Interface (API).

1 20. (Original) The computer-readable storage medium of claim 11,
2 wherein the service profile implements a domain-specific protocol stack
3 associated with the new service.

1 21. (Currently amended) An apparatus that facilitates dynamic
2 delivery of service profiles to a client, comprising:
3 a discovery mechanism configured to perform a discovery operation that
4 allows the client to discover new services on a network;

5 a profile transfer mechanism, wherein if a new service is discovered for
6 which the client does not possess a service profile for the new service, the profile
7 transfer mechanism is configured to cause the service profile to be transferred
8 from a service provider of the new service to the client;

9 wherein causing the client to obtain the service profile involves:

10 causing the client to send a request for the service profile to the
11 service provider of the new service, wherein the request includes type
12 information identifying the type of device platform of the client; and

13 causing the service provider to select the service profile from a set
14 of service profiles based on the received type information of the client;

15 and

16 an installation mechanism configured to cause the service profile to be
17 installed on the client to enable the client to use the new service,

18 wherein the service profile includes a specification that describes how to
19 use the new service, and wherein the installation mechanism is configured to,

20 cause device-specific code to be generated to implement the
21 specification, and

22 cause the code to be installed on the client;

23 wherein the service profile is a dynamic extension profile, which provides
24 ~~commands that:allows the client to dynamically acquire other service profiles~~
25 ~~when they are needed.~~

26 allow the client to query the service provider to determine which
27 service profiles are available on the service provider; and
28 transfer the service profile from the service provider to the client.

1 22. (Previously presented) The apparatus of claim 21, wherein the
2 profile transfer mechanism is configured to:

3 cause the client to send a request for the service profile to the service
4 provider of the new service; and to
5 cause the client to receive the service profile from the service provider of
6 the new service.

1 23. (Original) The apparatus of claim 21, wherein the service profile
2 includes code, and wherein the installation mechanism is configured to cause the
3 code to be installed on the client.

1 24. (Cancelled)

1 25. (Original) The apparatus of claim 21, wherein the service profile is
2 encoded in a universal form that can be executed by different types of clients.

1 26. (Previously presented) The apparatus of claim 21,
2 wherein there exist different service profile implementations for different
3 types of clients; and

4 wherein the profile transfer mechanism is configured to,
5 communicate characteristics of the client to the service
6 provider of the new service,
7 allow the service provider of the new service to select a
8 service profile implementation for the client based on the
9 characteristics of the client, and to
10 allow the service provider of the new service to send the
11 selected service profile implementation to the client.

1 27. (Original) The apparatus of claim 21, wherein the profile transfer
2 mechanism is configured to execute a dynamic extension profile, which

3 implements a standard protocol that enables the client to acquire any profile the
4 client needs at the time the profile is needed.

1 28. (Previously presented) The apparatus of claim 21,
2 wherein the discovery mechanism uses the Bluetooth Service Discovery
3 Protocol (SDP); and
4 wherein the client and the service provider of the new service
5 communicate using the Bluetooth networking standard.

1 29. (Original) The apparatus of claim 21, wherein the service profile
2 can define a service-specific Application Programming Interface (API).

1 30. (Original) The apparatus of claim 21, wherein the service profile
2 implements a domain-specific protocol stack associated with the new service.

1 31. (Currently amended) A device configured to dynamically deliver a
2 service profile to a client to enable the client to use a service provided by the
3 device, comprising:
4 the device configured to provide the service;
5 a memory within the device containing the service profile that enables
6 clients to use the service provided by the device;
7 a service profile obtaining mechanism configured to cause the client to
8 obtain the service profile by:
9 causing the client to send a request for the service profile to the
10 device , wherein the request includes type information identifying the type
11 of device platform of the client; and
12 causing the device to select the service profile from a set of
13 service profiles based on the received type information of the client; and

14 a profile transfer mechanism configured on the device to transfer the
15 service profile to the client on demand,
16 wherein the service profile includes a specification that describes how to
17 use the new service, and wherein causing the service profile to be installed on the
18 client involves,
19 causing device-specific code to be generated to implement the
20 specification, and
21 causing the code to be installed on the client;
22 wherein the service profile is a dynamic extension profile, which provides
23 ~~commands that:allows the client to dynamically acquire other service profiles~~
24 ~~when they are needed.~~
25 allow the client to query the service provider to determine which
26 service profiles are available on the service provider; and
27 transfer the service profile from the service provider to the client.

1 32. (Original) The device of claim 31, further comprising a discovery
2 mechanism configured to perform a discovery operation that allows devices to
3 discover each other.